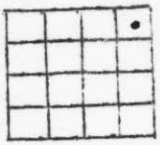
County Holt



sec. 21 twp. 63 rge. 40

owner Grunerwald Wm

elev. 973 MCS# 1882/spl V

farm Currie No. 1 TD 3210 fm@TD A (directly under the Docum) shows dst about St. Peter granite wash

Status P+A date completed 12-7-59

remarks: produced oil originally

00014

ERODS

Index: 5—Holt County
Name: Wm. Gruenerwald No. 1 Currie*
Loc.: C NE NE sec. 21, T. 63 N., R. 40 W.
Elev.: Kelly bushing 973 ft. *T.D.:* 3210 ft.
Prod.: 124.94 B.O.P.D. initial. No water *Spud:* 11-14-59
Rotary Comp.: 12-7-59
Casing: 8⅝" surface set @ 289', 5½" set @ 3071'
Log by: Jack Wells *Contractor:* Nemaha Oil Company Rotary tools

	Thickness	*Depth*
No samples	350	350
Pennsylvanian System		
Shawnee gp	200	550
Douglas gp	127	677
Pedee gp	33	710
Lansing-Kansas City gps	290	1000
Pleasanton-Marmaton gps	160	1160
Cherokee gp	740	1900
Mississippian System		
Warsaw fm	30	1930
Burlington fm	45	1975
Chouteau gp	85	2060
"Kinderhook shale"	238	2298
Devonian System		
Undifferentiated	292	2590
Silurian System		
Undifferentiated	270	2860
Ordovician System		
Maquoketa fm	37	2897
Kimmswick fm	217	3114
Decorah fm	24	3138
Igneous material	72	3210 T.D.

*Discovery well—Corning Field—plugged and abandoned in 1961.

MAP NO. 92 ELEV. 970 DF

STATE Mo. COUNTY Holt SEC. 21 TWP. 63N RGE. 40W

OPERATOR Wm. Gruenerwald LOC. C NE NE

WELL NO. 1 FARM NAME Currie FT. FROM LINE

POOL WC FT. FROM LINE

FR. 12-2-59 SPUD 11-31-59 COMP.

CONT./GEOL. Nemaha Drlg. Tools Tom Wright-Geol.

	NAME PRODUCING INTERVAL	COMPLETION RECORD FROM — TO	PERF. W/HOLES	TREATMENT RECORD
a	V	2971-75	w/4	1000A
b			Abra Jet	
c				
d				

a I. P. OIL/DIST. P 44 BO 4 WTR. 64 BWPD GAS M.C.F.P.D. CHK. HRS.

b " " " " " "

c " " " " " "

d

D & A ( )

SIP# FI TP # FI CP# SIBHP

GOR. GR. 29.9 PBTD TD 3214

CASING - CEMENT RECORD SIZE	DEPTH	W/SAX.	SIZE	DEPTH	W/SAX.
8"	289	130			
5½"	2987				

OPERATOR Wm. Gruenerwald WELL NO. 1 Currie ELEV. 970 DF

SAMPLE TOPS	DEPTH	SUB SEA	ELEC. TOPS	DEPTH	SUB SEA
	Carter - AC & DHM				
LKc	675		LKc	675	
BKc	985		BKc	994	
M	1909		M	1904	
Hun	2295		Kh	2054	
Maq	2857		Hunt	2302	
V	2944		Maq	2856	
S	3114		V	2941	
GW	3140		S Sh	3124	
			no St. Pet.		
			no Arb		
			GW	3136	

DST 2965-90, O 1½ hrs,
R 250' oil (est. 30°)
10' MW, FP 150115#
BHP 1195#/20"-1190#/20"
TD reported 15' of Viola Pay
Abra Jet 2974 clear around
2971 = 3 PF
2972 = 3 PF
2975 = 3 PF

Hole full oil before POP
P 2½ BOPH 31.5° NW (not enough elect.) selling oil for $2.55 PB @ well head

mm

92

SHEET NO. 2 MAP NO.

STATE Mo COUNTY Holt SEC. 21 TWP. 63N RGE. 40W

OPERATOR Wm. Gruenerwald LOC. C NE NE

WELL NO. 1 FARM NAME Currie

P 10 BO 8 hrs, Pmp off, to perf more Zn & Acidize 1000A, Rec ld, POP, Couldn't pump down, P 125 BOPD NW for 3 days S.I. Tanks, Selling oil for $2.20 P.B. at well head. Oil goes to Platt Pipe Line in NE Kans.

OPERATOR Wm. Gruenerwald WELL NO. 1 Currie

CS

T. G. WRIGHT
CONSULTING GEOLOGIST
305 UNION CENTER
WICHITA 2, KANSAS

GEOLOGICAL WELL REPORT

WM. GRUENERWALD

#1 CURRIE

C NE NE, SECTION 21-T63N-40W

HOLT COUNTY, MISSOURI

By

T. G. WRIGHT

305 UNION CENTER
WICHITA 2, KANSAS

December 19, 1959

GEOLOGICAL WELL REPORT

Wm. Gruenerwald #1 Currie
C NE NE, Section 21-T63N-40W
Contractor: Nemaha Oil Company
Spud: November 14, 1959
8-5/8" Surface Casing @ 289'
Rotary Completion: December 7, 1959
5-1/2" Casing at 3071'

Mr. Wm. Gruenerwald
35 E. Wacker Drive, R. 852
Chicago 1, Illinois

Dear Sir:

Following are the pertinent geological tops, an evaluation of the porosities encountered and a record of all tests made at the captioned well.

I arrived at the location at a depth of approximately 550 feet and witnessed the drilling through the intervals 550-2340 and 2850 -3210 T.D. Samples were examined from 500' to total depth. The hole was logged electrically before being cased, the electric log data is included herewith.

Enclosed is a copy of the plotted drilling time log which includes lithology, porous zones, tests and other pertinent data.

GEOLOGICAL TOPS

	Electric Log	Samples
Elevation: 983 R.B.		
Lansing-Kansas City	675 (+298)	675 (+298)
Base Kansas City	994 (- 21)	991 (- 18)
Mississippian Limestone	1903 (-930)	1905 (-932)
Kinderhook	2052 (-1079)	2050 (-1077)
Hunton	2302 (-1329)	2298 (-1325)
Maquoketa	2855 (-1922)	2857 (-1884)
Viola (Trenton)	2940 (-1967)	2944 (-1971)
Simpson	3117 (-2144)	3114 (-2141)
Granite Wash	3136 (-2163)	3138 (-2165)
Total Depth	3204	3210
Viola (Fernvale	2888 (-1915)	

POROUS ZONES

CHEROKEE SANDS

1455-1482	Sandstone, fairly clean, medium grained, clustered, friable, some clean clustered, porous sandstone, mainly loosely lime cemented. Fair porosity, no show.
1553-1557	Sandstone, white, clean, clustered. Good porosity, no show.
1734-1770	Sandstone, white, clean, medium grained, friable, porous, no show. In part iron-stained and tight.
1796-1805	Sandstone, white to iron-stained, fine to medium grained, clustered, some porosity, no show.
1823-1837	Sandstone, white, fine to medium grained, tight to loosely cemented, some porosity, no show.
1843-1890	Sandstone, white fine, clustered to coarse, angular, loose sand grains. Good porosity, no show.

MISSISSIPPIAN LIMESTONE

1905-1938	Dolomite, tan to light gray, finely crystalline to sucrosic, and brown to reddish brown medium crystalline, scattered cherty zones. Streaks of intercrystalline porosity, no show.
1962-1978	Dolomite, buff, sucrosic to trace oolicastic, good cavernous and intercrystalline porosity, no show. Much white to light gray vitreous chert.

HUNTON

2302-2320	Dolomite, tan, finely crystalline to buff medium to coarsely crystalline. Much coarse calcite veining. Good to excellent porosity, no show.
2376-2400	Dolomite, brown, resinous, medium crystalline to sucrosic, possible sucrosic porosity, no show.

Hunton (Cont.)

2474-2493 Dolomite, tan to buff finely crystalline to sucrosic. Good intercrystalline porosity, no show.

2564-2770 Primarily an extremely coarsely crystalline dolomite section, white to tan and light gray. Zones of excellent porosity, no show. This is a bad loss circulation section.

VIOLA

2971-2980 Dolomite, tan medium crystalline, cavernous, druzy dolomite. Good cavernous porosity and saturation. Good fluorescence, fair odor. DST #1.

3020-3040 Dolomite, light gray to brown, finely crystalline, fractured, cherty, with some porosity, generally poor, and tarry residual oil and gilsonite in evidence.

3090-3095) & 3104-3110) Dolomite, brown to gray, medium to coarsely crystalline. Thin zones of cavernous porosity, no show.

GRANITE WASH

3138-3210 T.D. This section is characterized by the upper portion appearing more granitic than below with pink and clear angular quartz and black mica in evidence grading into fine to coarse, angular to subrounded quartz sand, undoubtedly carrying zones of porosity, no show.

DRILL STEM TESTS

Test #1: 2965-90, open 1-1/2 hours, shut in 20 minutes. Medium blow throughout test. Recovered 260 feet of fluid including 250 feet of clean, dark oil and 10 feet of mud. No evidence of water. Initial flow pressure 15#, final flow pressure 115#, Initial bottom hole pressure 1195#, Final bottom hole pressure 1190#/20 minutes. Hydrostatic Head 1430#, Bottom Hole Temperature 101°F.

CONCLUSIONS and RECOMMENDATIONS

With the sparse subsurface control in the area, it is difficult to make a local structural comparison. Your #1 Weedin dry hole in Section 33-64N-40W is the closest test.

On the basis of Pennsylvanian structural relationship, the subject well is for all practical purposes flat with the #1 Weedin. This perhaps gives the indication that the well is higher than normal on the top of the Lansing-Kansas City when regional dip is considered. However on the top of the Mississippian Limestone the subject well is about 70 feet lower than the Weedin due to Pre-Pennsylvanian truncation. Thinning in the Mississippian makes the #1 Currie only 14 feet lower than the Weedin at the top of the Hunton. At the Maquoketa level we were 25 feet higher than the Weedin, showing thinning in the Siluro-Devonian. Upon reaching the Viola the #1 Currie checks slightly more than 20 feet higher than the Weedin, about as was indicated on the top of the Ordovician at the Maquoketa. In the Viola we developed a porous dolomite section placed 2971-80 which yielded the oil on drill stem test. This zone also indicates thinning in the Viola as compared to the #1 Weedin. On the Simpson the subject well is running 74 feet higher than the dry hole #1 Weedin. From this point on a cut-out of the St. Peter Sandstone (Simpson) and the entire Arbuckle section is in evidence from the #1 Weedin, to the north, since the #1 Currie goes from upper Simpson into Granite Wash. On the two wells at the Granite Wash level the #1 Currie is about 600 feet higher than the #1 Weedin. In all, a cut-out of approximately 535 feet of Simpson and Arbuckle is shown from the #1 Weedin to the #1 Currie.

It is clear that you have discovered an old fold of considerable magnitude but subsequent structural growth following the initial movement is not apparent except mildly through the Siluro-Devonian. Mississippian and younger rocks do not reflect the magnitude of the old structure. This will complicate extension and development of similar features in the area.

The "show of oil" in the Viola was considered of sufficient importance to justify casing the hole. Such was recommended and perforations of 2971-75 were recommended.

Yours very truly,

T. G. WRIGHT
Consulting Petroleum Geologist

DAILY DRILLING PROGRESS

November	14, 1959	Spud			
	18	Start under surface			
	19	720	November	28	2542
	20	1055		29	2639
	21	1522		30	2797
	22	1720	December	1	2912
	23	1920		2	2985
	24	2022		3	3005
	25	2209		4	3065
	26	2336		5	3130
	27	2424		6	3210 TD

BIT RECORD

Reed	YT3	289-820
Reed	YT	820-1522
Reed	YT	1522-1654
Hughes	W7	1654-1853
Hughes	W7	1853-1955
Reed	YH	1955-2022
Hughes	W7	2022-2209
Reed	YH	2209-2342
Hughes	W7	2342-2424
Reed	YH	2424-2541
Hughes	W7	2541-2577
Reed	YH	2577-2755
Reed	YH	2755-2912
Hughes	W7	2912-2951
Hughes	W7	2951-2990
Hughes	W7	2990-3024
Reed	YH	3024-3065
Hughes	W7	3065-3105
		3105-3210 T.D.